

**Notice of Allowability**

Application No.

10/683,957

Examiner

Michael Trinh

Applicant(s)

BURR, JAMES B.

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 10/10/03.
2. ☒ The allowed claim(s) is/are 22-38.
3. ☒ The drawings filed on 10 October 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 10/10/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Michael Trinh  
Primary Examiner

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## **DETAILED ACTION**

\*\*\* This office action is in response to Applicant's Pre-Amendment filed October 10, 2003. Claims 22-38 are currently pending. Claims 1-21 were canceled.

### **Examiner's Amendment**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

### **IN THE SPECIFICATION:**

Page 1, before the first line, change "This application is a divisional of U.S. Patent Application Serial No. 09/996,705, entitled "BACK-BAISED MOS DEVICE", filed on November 30, 2001." to

-- This application is a divisional of U.S. Patent Application Serial No. 09/996,705, entitled "BACK-BAISED MOS DEVICE", filed on November 30, 2001, now U.S. Patent No. 6,664,608.--

### ***Allowable Subject Matter***

2. Claims 22-38 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:  
The references including Violette (6,245,604), Mitzukami (5,581,103), Hui (5,286,991), Farrenkopf (5,899,714), etc., of record, alone or in combination, do not fairly anticipatively disclose each and every aspect of the claimed method, or fairly make a prima facie obvious case of the claimed method, in combination with other processing claimed limitations, as recited in base claim 22, the inclusion of forming a first buried layer of a second conductivity between a back side of the bulk material and the first well of a first conductivity, the second well of a first conductivity, and third well of the second conductivity; forming a second buried layer of the first conductivity between the first buried layer and the second well; supplying a first potential to the

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first well; supplying a second potential to the second well with the second buried layer; and supplying a third potential to the third well with the first buried layer;

as recited in base claim 34, the inclusion of forming and supplying at least one of the first wells of a first conductivity with the first potential applied to a back side of the bulk material; forming and supplying at least one of the second wells with a second different potential; forming third wells of a second conductivity; forming a first buried layer of a second conductivity extending between back side of the bulk material and the first, second, and third wells; forming at least one opening in the first buried layer to electrically connect the bulk material with the at least one of the first wells supplied with the first potential; electrically isolating the at least one of the second wells supplied with the second potential from the at least one opening of the first buried layer by at least one of the third wells; and,

as recited in base claim 38, the inclusion of forming n layers and p layers alternately within the bulk material between a back side of the bulk material and n-wells and p-wells formed in a front side of the bulk material; wherein the n layers are electrically isolated from one another and respectively route different potentials to selected ones of the n-wells, and wherein the p layers are electrically isolated from one another and respectively route different potentials to selected ones of the p-wells.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Trinh whose telephone number is (571) 272-1847. The examiner can normally be reached on M-F: 8:30 Am to 5:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone numbers for the organization where this application proceeding is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Oacs-3



Michael Trinh  
Primary Examiner